ABSTRACT OF THE DISCLOSURE

A surface of a reference sample is contaminated with a transition metal, and a heat treatment is performed to diffuse the transition metal in the sample. A concentration of recombination centers formed by the transition metal is measured in the entire heat-treated reference sample, and a region [V], a region [Pv], a region [Pi], and a region [I] in the reference sample are defined based on the values measured. Meanwhile, recombination lifetimes associated with the transition metal are measured in the entire heat-treated reference sample. Based on both of the measurement results, a correlation line of the concentration of recombination centers and the recombination lifetimes is produced. A surface of the measurement sample is contaminated with the transition metal, and a heat treatment is performed to diffuse the transition metal in the sample. Recombination lifetimes associated with the transition metal are measured in the entire heat-treated measurement sample, and the values measured are checked against the correlation line to infer the region [Pv] and the region [Pi] as well as the boundary thereof in the measurement sample.